WALTHAM PUBLIC LIBRARY
3 4867 00639 2247

WORKERS TOGETHER

WALTHAM, MASS., U.S.A.

Wal. Ref.
IND./W.W.Co./Box 4
681
MAR

"Workers Together"

A STORY OF PLEASANT CONDITIONS
IN AN
EXACTING INDUSTRIAL ESTABLISHMENT

By E. A. MARSH
Consulting Superintendent

WALTHAM WATCH COMPANY, WALTHAM, MASS.
Nineteen Hundred and Sixteen

Digitized by the Internet Archive
in 2016

https://archive.org/details/workerstogethers00mars

Three Stages of Progress

1854

1880

1916

SOCIALISM, as a dream, or a theory of ideal industrial conditions, is not without attractive features. But, without a radical change in human nature, it seems impossible of practical attainment, and must therefore continue to exist solely in imagination. Nevertheless, it is not impossible, nor impracticable, to greatly improve conditions in industrial establishments so as to reduce the chance of misunderstandings, distrusts and conflicts which so often occasion loss, not alone to the persons directly concerned, but indirectly to entire communities and allied business interests. The successful experience of nearly three score years of exacting requirements in manufacturing by the Waltham Watch Company has come to be so widely known as to occasion the writing of many letters of inquiry from manufacturers and others, to the Company, for information concerning the very pleasant conditions that exist in the Waltham factory. It is with the desire to assist future inquirers in this direction that this booklet has been prepared. In order to reach a better understanding of the text, as well as to simplify descriptions, it has been thought best to make a liberal use of illustrations. Concerning these, it may be needless to say that they represent what has been done in connection with this individual manufacturing plant. It is realized that what has been done here might be entirely impracticable in detail or extent, in connection with a majority of manufacturing establishments, and for two related reasons: First, the character of our product; for it is self-evident that conditions which are entirely appropriate, and to some extent essential, in a watch factory, would be, for instance, needless and incongruous in a locomotive shop: Second, the peculiar qualifications which are essential in the employee. No arguments are needful to convince one that, for the manufacturer of watch movements, there is required a high degree of intelligence, a fine perception of delicate distinctions, deftness in manipu-

lation, and, for certain lines of the work, a sound judgment, founded on practical experience. Other lines of our work demand a high degree of mechanical ingenuity, which necessitates active imagination. All of these, and many other characteristics, constitute *high grade employees*. Inasmuch as certain of the above qualifications are to a high degree possessed by women, it has been found practical to employ them in relatively large numbers, on certain lines of our work.

Notwithstanding what we have said concerning our own conditions and requirements as contrasted with other lines of manufacturing, we feel that our long experience justifies us in expressing our confident belief that conditions similar to what we have developed will be found practical and profitable to almost every industrial establishment.

The planning and carrying out of any scheme of Industrial Betterment demands the exercise of much deliberation and care. Some well-intended and liberal schemes have met with opposition for lack of understanding, or because of the attempts to do *too much*, or of failure in tact. It is not to be expected that any given method would prove successful in every industry, but if the sincere relations suggested by the title of this booklet can be established, and heartily maintained, the resulting conditions cannot fail to be most helpful to all concerned.

Historical

The work, preliminary to the establishment of the Waltham Watch Factory, was done in that part of Boston which, at the time of its commencement in 1850, was known as Roxbury. A few months' experience in that locality sufficed to demonstrate its unfitness for such a business, and a site was secured in Waltham, sufficiently large to meet requirements for factory buildings of what was then regarded as

liberal in extent, and also embracing sufficient adjoining territory to permit the erection of numerous homes for employees.

The land was carefully surveyed, streets were laid out, and shade trees were planted and the land divided into house lots, on a few of which a variety of modest houses was built by the Company for rent or sale to employees, on easy terms. A moderate size boarding house was built for the accommodation of unmarried employees. A few of the leading workmen built houses for themselves, which were somewhat more expensive in construction than those built by the Company.

Housing

At that time, there was found to exist in the mind of the general public a not unnatural prejudice against American watches, because they were then unknown. That fact, together with the universal financial panic of 1857, caused the collapse of the original watch company. In the summer of that year the property was purchased by Mr. Royal E. Robbins, of New York, who individually managed it for a time; but in order to secure sufficient additional capital, a corporation was formed, and the business has been gradually enlarged, and the invested capital which in 1858 amounted to $200,000, has, by numerous additions, now reached the sum of $12,000,000. In some of the issues of new stock, provision was made by which the Company's employees were allowed to purchase shares on more favorable terms than were allowed to the general public. The original watch factory buildings, erected in 1854, were probably regarded as quite up to date, if not, indeed, in advance of the times. The material employed in the construction of the walls was a sort of concrete, not composed of crushed stones and hydraulic cement, as used at present, but of common gravel, as found on the premises, in combination with lime mortar. The buildings were quite narrow, the rooms being about sixteen

Capital

"CEMENT WINGS," 1864

feet in the clear, and about nine feet high. To secure sufficient light the windows were located as near together as the form of construction would allow. When the need for enlargement of the factory developed, the form of construction was modified, and the added buildings were constructed with skeleton frames of light timbers filled in with bricks laid in mortar.

Second Style of Buildings

The rooms were also made wider and correspondingly higher. The last of the original buildings was demolished in 1879 to give place to a third and permanent form of construction, of substantial buildings of brick and mortar. These later wings have an interior width of twenty-four feet and four inches. In the later buildings the windows are grouped so as to allow heavier intervening piers without at all reducing the total illuminating space. Strength and stability of construction have been insured in this later form by the use of structural iron, so that not only are the supporting walls made rigid, but are also made to sustain the floors as well, thereby avoiding the interference of supporting columns or posts which were necessarily employed in all of the previous buildings.

Modern Construction

This form of construction has lent itself to a degree of fire protection which is so essential, especially because of the immense value of the great number of automatic machines which are grouped so closely in many of the rooms.

The windows extend as nearly as possible to the ceilings, in order that outside light may penetrate to the center of the workrooms, and as a further aid to that end, the upper sashes are glazed with rippled glass, which aids in a general diffusion of the light. The side walls of all rooms are of brick, so as to avoid danger from fire, but they are carefully whitened

FRONT VIEW OF FACTORY

and covered with a glossy paint, so that they can be kept clean. All windows are periodically washed—both inside and out. All floors are carefully swept daily, and are also scrubbed every few days by a force of women who are constantly employed under direction of a forewoman. The rooms are warmed by steam to a temperature of about 70 degrees, inasmuch as most of our operatives perform their work while sitting.

Floors

The extensive increase in the public demand for Waltham Watches has made needful the enlargement of the factory, and the nature of the product demands that its manufacture be as compactly arranged as possible. That fact has led to the growing height of the factory buildings, and, inseparable from that condition, is an added fire risk and a corresponding personal danger to employees, in the event of fire. In the construction of these later buildings special attention has been given to these hazards, by the adoption of what is designated as "slow burning" form of construction. This embraces both the building *materials* used and the *form* of their employment.

The workrooms are provided with at least two exits. Furthermore, the rooms and corridors are separated by automatic closing fire doors. The entire factory is also equipped with automatic sprinklers, to which water is supplied from the City Water Supply, and also by two large steam pumps having a united capacity of 2,500 *gallons per minute.*

Aside from the necessity for plenty of light, proper ventilation and sufficient heat, to insure the health and comfort of the operatives, it has always been the belief of the Managers of the Waltham Watch Company that not only healthful and convenient conditions should be provided in the factory itself, but that the surroundings also should be pleasant, and

FIREPROOF STAIRWAY EXIT

even attractive. The rear of the factory grounds stretch along the banks of the Charles River, so that very little is necessary in that direction to increase the attractiveness of the outlook.

Environment

Successive enlargements of the factory have made needful the re-purchase of a number of estates which were originally sold for residential purposes, and the extension of the buildings, which now present a continuous front of one thousand feet. The land in front of the entire factory is owned by the Company and is laid out in public parks with suitable walks and planted with a variety of shade trees.

In courts between the numerous wings of the now extensive factory, ornamental or flowering shrubs are planted, and in summer the splashing water of fountains suggests a coolness which is delightful and refreshing.

These contrasted views are restful to the eyes of the employees as they momentarily glance from the delicate work which so absorbs their attention, and, while not distracting, are, perhaps, unconsciously elevating in their effect. It is felt that the moral influence of these refined and pleasing surroundings is ample justification for their existence and continuance.

Superior Qualities of Employees

The existence of this provision of healthful and attractive conditions is no insignificant factor in the matter of obtaining, and of retaining, a working force of people of high intelligence and refinement, a body of employees which it is believed cannot be equalled in any manufactory of its size in the world.

While it has been the purpose and endeavor to provide attractive exterior conditions at the Waltham Watch Factory, it has not been done at the expense of interior convenience

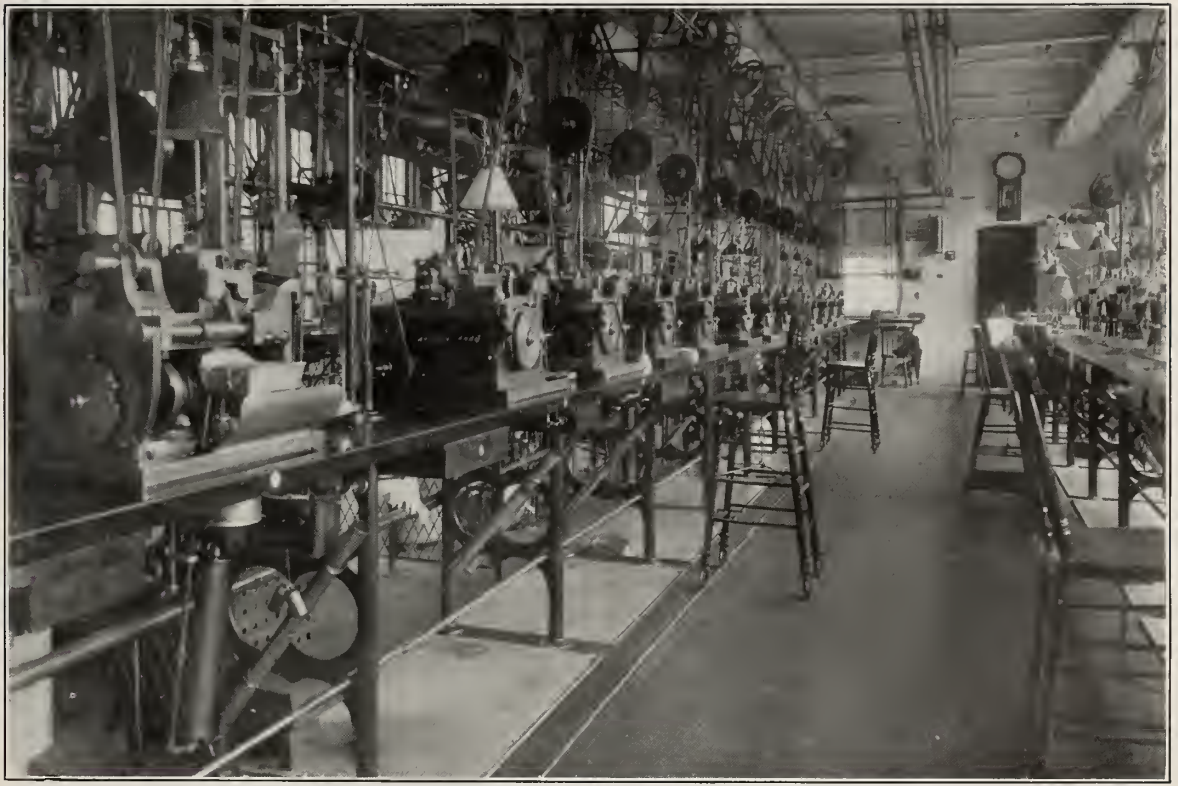
ONE OF THE THREE FACTORY PARKS, "FITCH PARK"

and comfort. Mention has been made of the fact that our operatives, to a great extent, perform *their work while sitting.* Where an operative's work is confined to a definite place at a bench, or in connection with a single machine, an ordinary chair of suitable height will suffice for convenience and comfort; but in cases in which a number of similar but independent automatic machines are to be attended by one person, it would be inconvenient and, indeed, impracticable to make use of an ordinary chair for sitting, and would be quite fatiguing to be constantly walking from one to another of a row of machines. Therefore, to avoid needless fatigue, and to facilitate the work of the operator, a special chair has been provided which is equipped with rollers—two of which are grooved to fit and run on an iron track attached to the floor in front of the various groups of machines. Inasmuch as these chairs are required to be of a special height, which does not permit the feet of the occupant to reach the floor, an adjustable foot rest is provided. By this arrangement the operative can move from the extreme ends of an extended group of machines as quickly as by walking.

Roll Chairs

A noon lunch is served to the women in the well-equipped room in our factory, and is very much appreciated on stormy days, particularly in winter. The attendance at this lunch room is from one hundred to one hundred and fifty in ordinary weather, and sudden or severe storms often raising the attendance to more than twice the number.

Directly over this lunch room is a large, high room, fitted with a variety of easy chairs, settees, and couches; also, there is a supply of magazines, and a grand piano, with an Angelus Player, so that those who wish to do so may rest while others may sing or dance during the noon hour.



ONE OF THE "AUTOMATIC ROOMS" SHOWING ROLLER CHAIRS

LUNCH ROOM IN FACTORY, FOR WOMEN ONLY

REST ROOM

The established schedule of working hours for the operatives has been so arranged that all women employees are allowed to cease work and leave the factory five minutes at noon and six minutes at night before the closing time for the men. This plan avoids the otherwise congested condition of the corridors, and the natural crowding and discomfort caused by the endeavors of more than three thousand people to get out of doors in quick time. This plan also enables the women to get seats in the waiting electric cars and barges having regular routes throughout the city.

Drinking Water

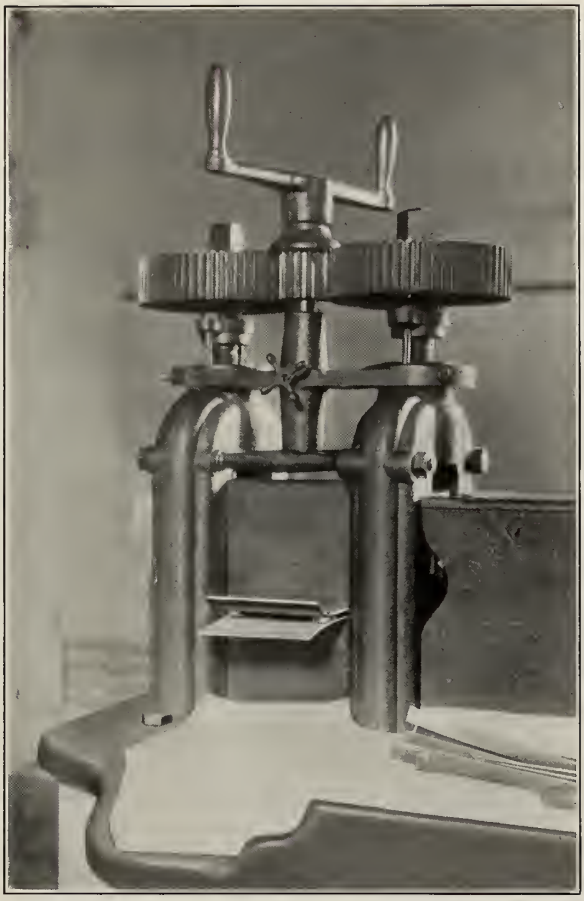
Cool drinking water is distributed to the various workrooms throughout the factory in carboys. The carboys are packed with granulated cork, which keeps the water cool for twenty-four hours. The water is taken from the City Water System and passed through a purifier, and thence through a long coil of pipe, which is surrounded by chopped ice. When drawn from this coil the water is always sufficiently cool for drinking. The boxes containing the drinking water are so mounted in suitable frames as to allow the boxes to be easily tilted and the individual drinking cups to be easily filled.

The invention and construction of wonderfully accurate automatic machinery have rendered unnecessary to a great extent the manual dexterity which is so essential in this industry in the Old World; our adoption of this machinery does not, however, make less the need of high intelligence in our workmen.

It is an undisputed fact that the scale of wages at the Waltham Watch Factory is higher than in any other watch factory in the world. The feeling that our Company aims to be not only *just*, but even *liberal* with its employees, has made it easy to secure sincere co-operation, and a dignified feeling that we are all "Workers Together."

WOMEN LEAVING THE FACTORY AT NOON

MODERN CONSTRUCTION OF WINGS SHOWING FIRE ESCAPE



ROLLING MILL, PROTECTED WITH CASINGS AND FEEDER PLATES. IT IS IMPOSSIBLE FOR THE OPERATOR'S HANDS TO BE DRAWN IN BETWEEN THE ROLLS

DROP PRESS, WITH SAFETY ARMS, MAKING IT IMPOSSIBLE FOR THE DROP TO FALL WHILE THE OPERATOR'S HANDS ARE OVER THE DIE

NURSES' OFFICE—EMERGENCY ROOMS ARE LOCATED ONE ON EACH SIDE

The large aggregation of individuals grouped in the various workrooms of the present extended factory buildings has compelled the adoption of every practical means for ensuring individual safety from accidental injury.

Safeguards

While most of the machinery employed in the production of watch parts is both small and compact, it is not possible to secure absolute immunity from a possibility of bodily injury. But the adoption of a variety of ingenious safeguards has served to render even minor injuries comparatively rare. In cases of occasional accidents we have a well-equipped Emergency Room, where one or the other of our two resident nurses is in constant attendance, for consultation or assistance. We have no resident physician, but our doorkeeper has in plain sight a list and telephone numbers of several near-by physicians who promptly respond to our calls. A like response is made by a livery stable, which promptly supplies an automobile to convey sick persons to their homes, or to our City Hospital, in which our *Company maintains six free beds* for the use of our operatives. In cases of accidents the doctors' bills are also paid by our Company, and in most instances full time is allowed until the person is able to resume work. While we have at the present time a force of about 3,500 employees—more than one-half of whom are women—this item of voluntary aid is not regarded as burdensome. It tends to secure steady and faithful attendance at work, and to relieve a feeling of anxiety on the part of the injured or sick, and thereby aids in speedy recovery

Emergency Provisions and Resident Nurses

Hospital Provisions

Extract from Factory Nurse's Annual Report to the Management

"It is almost impossible to estimate the ground which has been gained in preventing absences from work, prevention of contagion and infection, especially at times when there is a prevalence of disease, or possibly a threatened epidemic. During the recent epidemic of *la Grippe*, six to eight cases were visited daily at the Adams House; those, with outside calls, making a total of thirteen daily. Many of the girls were showing acute symptoms, all of them were anxious and worried and afraid of serious illness; some of these girls in lodging houses had been sick one or more days, with no care except what could be given by a friend between working hours; these conditions were bettered, the faithful friend relieved of the care, and anxious patients and friends encouraged and reassured. Simple cases responded to nursing treatment; others were referred to a physician; many of these girls recovered and were at work again within the week.

"Although the work is largely medical, surgical and contagious cases have been attended, and also several nervous cases, two cases of reported sore throat returned diphtheritic cultures, and were immediately isolated at the contagious ward; these cases made a speedy recovery and none have since developed.

"The service shows itself to be an avenue through which people may be protected against poor medical advice, and provided with proper care; and also a provision which will ensure the proper using of the Company's valuable supply of free beds at the Waltham Hospital.

"The lodging house people appreciate this service very much, and those who are helped during illness in their own homes are also strong friends.

ONE OF THE EMERGENCY ROOMS—THIS ONE IS FOR MEN

Very useful, indeed, is a *voluntary organization* among our people which has been in continuous and successful operation since 1866, known as the

Waltham Watch Factory Relief Association

It is a mutual benefit association, having paid to date in benefits to its members over $167,000, and having an enrollment at the present time of about 1,800 members. A copy of the By-laws and Constitution of the Association will be sent to any one who would be interested to read it.

While the Watch Company has never had any contol or voice in the management of this Association, it has been a yearly contributor to its Relief Fund, and the weekly meetings of the Relief Committee are held in one of the rooms of the factory, and in working time, and at the Company's expense.

Another voluntary association having the sanction and co-operation of the Watch Company is the

Watch Factory Foreman's Association

Foreman's Association

which holds stated meetings for the consideration of factory problems, with the purpose of hearty co-operation in endeavors to maintain the high standard of the factory product, to avoid possible jealousies, and to aid in harmonious endeavors for the prosperity of the factory. In addition to the business meetings, this Association has occasional social meetings, with lectures, or other entertainment, to some of which ladies are invited. The Watch Company occasionally gives a banquet to the Association, at which some officer of the Company usually presides. Aside

ONE OF THE "AUTOMATIC" ROOMS

from the social and harmonizing value of this Association of the Heads of Departments, it has a value as a channel through which the Management can come into a *nearer* relation to the great body of the employees. However desirable it might be for the Management to keep in individual touch with the productive force, it is, of course, an impossibility to do so with an aggregation of three or four thousand people. Notwithstanding the impossibility of maintaining personal communication between the Management and all the individuals who comprise the working force, there is no barrier to prevent the humblest worker from reaching the Ear of the General Manager or of the President. It needs no argument to make it plain that a contented worker is more serviceable than one who entertains the feeling that he is not properly appreciated, or is not fairly treated. A natural result of these pleasant relations and liberal and considerate treatment is a feeling of confidence and trust, which has manifested itself in the identifying of the great body of the employees with the organizations of our city and in the establishment of permanent homes, so that instances of continuous service of more than four decades are quite numerous.

Personal Appeals

Continuous Service of Employees

In contrast to these facts is the other fact that many young women are naturally attracted by the nature of our industry, and seek employment with the hope, at least, of sometime having homes of their own, and are glad of the opportunity to earn money in a pleasant way; so that we have in our employ hundreds of well-educated, attractive, high principled young women. For the help and comfort of that class, we have for years maintained a large boarding house under the care of a very competent matron.

ASSEMBLING ROOM WHERE WATCHES ARE "PUT TOGETHER"

This large house, however, can accommodate but a small proportion of our women. A limited number live with their parents, but the larger number live in private families, or boarding or lodging houses; but the fact of the Watch Company having provided a comfortable and well-furnished house, where good board can be obtained at a reasonable price, serves to keep down the price of board in the entire community. This is, of course, an advantage to the young women wherever they may prefer to board.

Boarding House

There is an element of sociability in the aggregation of young women which renders our Adams House, (named for an early President of the Watch Company,) an attractive home. Occasional entertainments for the benefit of our employees, as well as study classes in millinery, dressmaking, etc., are carried on during the winter months. Not the least attraction possessed by this home is its library of 1,200 volumes, the nucleus of which was a gift from a warm friend of the Waltham Watch Company.

In addition to the Adams House, housing two hundred and fifty girls, we have an ordinary adjacent house for lodging only, in charge of an assistant matron.

The churches of Waltham, particularly those on the south side of the river, are composed principally of factory employees, and clubs and various organizations for social and benevolent objects are sustained largely by watchmakers.

There have been organized among the workmen football, bowling and baseball leagues made up from the various departments of the factory, and great interest is shown in these sports, especially when rival teams are battling for the championship.

ADAMS HOUSE

LIBRARY IN ADAMS HOUSE PARLOR

"CHARLES RIVER" AND REAR VIEW OF FACTORY BUILDINGS

In conclusion, let us once more express our appreciation of the fact that the marked contrast in the personnel of *our* employees and those of the majority of manufacturing establishments would render it impracticable for other companies to undertake to do just what we have accomplished during the last half century.

It is a simple fact that watchmaking is far from being a bonanza. On the contrary, it is probably the most intricate and exacting line of manufacture now being carried on; still it is the conviction of the writer that the foundation of any successful attempt to improve industrial conditions must be a sincere desire for helpfulness. If such a spirit really actuates any manufacturer, it will be recognized by his employees and will meet with a measure of response, while the absence of such a spirit will negative any improvements in working conditions and will manifest itself in the quantity and quality of the output.

PRESS OF PERRY & ELLIOTT CO., LYNN